UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,642	01/16/2002	Erik Stefan Bahl	72162	5974

27975 7590 04/23/2004

ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A.
1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE
P.O. BOX 3791
ORLANDO, FL 32802-3791

EXAMINER	
RIOS CUEVAS, ROBERTO JOSE	
ART UNIT	**PAPER NUMBER**
2836	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,642	BAHL ET AL.	
	Examiner	Art Unit	
	Roberto J Rios	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20* is/are allowed.

6)☐ Claim(s) *1-4, 6-9, 11, 12, 14-17 and 21* is/are rejected.

7)☒ Claim(s) *5,10,13 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-9, 11, 12, 14-17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Notohamiprodjo (US patent 4,628,433).

As per claim 1, Notohamiprodjo teaches a method of supplying power to a load comprising the steps of: coupling output ports a plurality of power supplies to an output node that is arranged to be coupled to said load; controlling one of said power supplies so as to supply to said output node a regulated output voltage that is sufficient to meet current demand of said load; and controlling another of said power supplies so as to cause the continuous flow of a reduced current therefrom said output node less than said current demand of said load without an interruption in the continuous supply of current to said load, but sufficient enable said another power supply to supply said output voltage that is sufficient to meet said current demand of said load in the event an inability said one of said power supplies supply said regulated output voltage that meets said current demand of said load (Figure 3; col. 4, line 31- col. 5, line 46).

As per claim 2, Notohamiprodjo teaches step (a) comprising coupling the output port of said another of said plurality of power supplies to said output node through a diode, and wherein step (c) comprises controlling said reduced continuous current flow

from said another of said plurality of power supplies to said output node in accordance with the voltage drop across said diode (col. 4, line 31- col. 5, line 46).

As per claim 3, Notohamiprodjo teaches step (c) comprising comparing said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, causing said another of said power supplies to increase its output voltage sufficiently to force a continuous current flow through said diode that will enable said another of said plurality of power supplies to immediately respond to a change in load current demand, in the event of said inability of said one of said power supplies to supply said regulated output voltage that meets said load current demand (col. 4, line 31- col. 5, line 46).

As per claim 4, Notohamiprodjo teaches step (c) comprising coupling a voltage drop across said diode to an operational amplifier circuit that is configured to compare said voltage drop with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, supplying a feedback control signal to said another of said power supplies that is effective increase its output voltage sufficiently to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 6, Notohamiprodjo teaches a method of supplying power to a load comprising the steps of: diode-oRing output ports of redundant regulated power supplies to an output node that is arranged be coupled to said load, so that one of said redundant regulated power supplies provides said output node with a regulated output voltage that is sufficient to meet current demand said load; and monitoring the voltage

drop across a diode that diode-oRs the output port of another said redundant regulated power supplies to said output node, and providing a reduced continuous current flow from said another of said redundant regulated power supplies through said diode to said output node in accordance with the monitored voltage drop across said diode so as to enable said another of said redundant regulated power supplies to supply said regulated output voltage that is sufficient to meet the current demand of said load without an interruption in the supply of current to said load in the event of an inability of said one of said redundant regulated power supplies to supply a regulated output voltage that meets the current demand of said load (col. 4, line 31- col. 5, line 46).

As per claim 7, Notohamiprodjo teaches step (b) comprising controlling the flow of said reduced current from said another of said redundant regulated power supplies through said diode at a value that is less than the current demand of said load, but sufficient to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 8, Notohamiprodjo teaches step (b) comprising comparing said voltage drop across said diode with a prescribed voltage reference and, in response said voltage drop having a prescribed relationship with respect to said reference voltage, causing said another of said redundant regulated power supplies to increase its output voltage sufficiently to force a current flow through said diode that enable said another of said redundant regulated power supplies to immediately respond to change in load current demand, in the event of said inability of said one of said redundant regulated power supplies to supply said regulated output voltage that meets said load current demand (col. 4, line 31- col. 5, line 46).

As per claim 9, Notohamiprodjo teaches step (b) comprising coupling a voltage drop across said diode to an operational amplifier circuit that configured compare said voltage drop with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, supplying a feedback control signal to said another of said redundant regulated power supplies that is effective increase its output voltage sufficiently to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 11, Notohamiprodjo teaches a power supply system comprising redundant regulated power supplies, outputs of which are diode-oRed to an output node arranged to be coupled to a load, with one of said redundant regulated power supplies outputting regulated output voltage that sufficient meet current demand of said load, each power supply having an associated monitoring circuit that monitors the voltage drop across its OR-ing diode, and wherein the monitoring circuit for another of said redundant regulated power supplies, other than said one of said redundant regulated power supplies, controls its operation so that said another power supply provides a reduced continuous current flow through diode to said output node that is less than the current demand of the load, but is sufficient to continuously forward bias said diode so as to enable said another of said redundant regulated power supplies to supply said regulated output voltage that is sufficient to meet the current demand of said load without an interruption in the supply of current to said load in the event of an inability of said one of said redundant regulated power supplies to supply a regulated output voltage that meets the current demand of said load (col. 4, line 31- col. 5, line 46).

As per claim 12, Notohamiprodjo teaches said monitoring circuit for another of said redundant regulated power supplies comprising an operational amplifier circuit coupled compare a voltage drop across said diode with a prescribed voltage reference and, response to said voltage drop being less than said reference voltage, to supply a feedback control signal to said another of said redundant regulated power supplies that is effective increase its output voltage sufficiently to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 14, Notohamiprodjo teaches a system for supplying power a load comprising: redundant regulated power supplies having output ports thereof diode-oRed an output node that is arranged to be coupled to said load, one of said redundant regulated power providing said output node with a regulated output voltage that sufficient meet current demand of said load; and circuit coupled to monitor the voltage drop across diode which diode-oRs the output port of another of said redundant regulated power supplies to said output node, and being operative control the operation said redundant regulated power supplies, so as provide reduced continuous current flow from said another of said redundant regulated power supplies through said diode to said output node in accordance with the monitored voltage drop across said diode so as to enable said another of said redundant regulated power supplies to supply said regulated output voltage that is sufficient to meet the current demand of said load without an interruption in the supply of current to said load in the event of an inability of said one of said redundant regulated power supplies to supply a regulated output voltage that meets the current demand of said load (col. 4, line 31- col. 5, line 46).

As per claim 15, Notohamiprodjo teaches said monitor circuit being operative to cause the flow of said reduced current from said another of said redundant regulated power supplies through said diode be at a value that is less than the current demand of said load, but is sufficient to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 16, Notohamiprodjo teaches said monitor circuit being operative to compare said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, to cause said another of said redundant regulated power supplies to increase its output voltage sufficiently to force a current flow through said diode that enable said another of said redundant regulated power supplies to immediately respond to a change in load current demand, in the event of said inability of said one of said redundant regulated power supplies to supply said regulated output voltage that meets said load current demand (col. 4, line 31- col. 5, line 46).

As per claim 17, Notohamiprodjo teaches said monitor circuit comprising an operational amplifier circuit coupled to compare a voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, to supply a feedback control signal to said another of said redundant regulated power supplies that is effective increase its output voltage sufficiently to forward bias said diode (col. 4, line 31- col. 5, line 46).

As per claim 21, Notohamiprodjo teaches a circuit for monitoring the output of a regulated power supply comprising: a diode coupled between the output of said regulated power supply and an output node adapted to be coupled to a load; an

operational amplifier circuit coupled to compare a voltage drop across said diode with a prescribed reference voltage and, in response to said voltage drop being less than said reference voltage, to supply a feedback control signal to said regulated power supply that is effective increase its output voltage sufficiently to forward bias said diode, wherein said monitor circuit is operative to compare said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, to cause said regulated power supply to increase its output voltage sufficiently to force a continuous current flow through said diode that will enable said regulated power supply to immediately respond to a change in load current demand so as to enable said another of said redundant regulated power supplies to supply said regulated output voltage that is sufficient to meet the current demand of said load without an interruption in the supply of current to said load in the event of an inability to said one of said redundant regulated power supplies to supply a regulated output voltage that meets the current demand of said load (Figure 3; col. 4, line 31- col. 5, line 46).

3. Art of general nature relating to power supply control has been cited for applicant's review.

Allowable Subject Matter

4. Claim 20 is allowed.

5. Claims 5, 10, 13 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest comparing the output port voltage of said power supply with a further reference voltage, and in response to said output voltage being above said reference voltage controlling said feedback signal to regulate the power supply output voltage as in the claimed combination of elements recited in claims 5, 10, 13, 18 and 20, respectively.

Response to Arguments

7. Applicant's arguments with respect to claims 1-4, 6-9, 11, 12, 14-17 and 21 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication with PTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (571) 272-2056. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (571) 272-2800, ext. 36. The fax number for Before-Final communications and After-Final communications is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Roberto J. Rios
Patent Examiner